

FLEXIBLE TRI-FOLD GARMENT BAG**RELATED APPLICATIONS**

This application claims priority on United States Provisional application Serial Number 60/425,743 filed November 13, 2002,
5 the entire contents of which is incorporated herein by reference.

FIELD OF THE INVENTION

This invention relates in general to garment bags and in particular to a soft type of garment bag which can be folded
10 into three sections often called tri-fold bags and is capable of containing different items of clothing which are housed in their entirety within the garment bags.

BACKGROUND OF THE INVENTION

Garment bags are either the hard, stand alone type or the
15 soft type. The soft type of garment bag either has a frame or is frameless, and both types must be hung or laid flat on a supporting surface because they are unable to stand upright in either the folded or unfolded state. Soft type garment bags have come into extensive use in recent years and are generally
20 of the type having flexible walls and a cover with a closure means such as a zipper to provide an enclosed housing for garments. The bags are usually provided with means on the top thereof for suspending the bag while loading and unloading the same with garments of various lengths that are usually mounted
25 on a hanger. The garment bag can be provided with a clamp that receives and fixedly holds the hanger. Once loaded, the garment bag can be folded for more convenient transport or carried in an extended condition.

Examples of garment bags of the hard frame type are
30 disclosed in the following U.S. patents, each of which is also incorporated herein by reference: 5,330,049; 3,958,675; 3,221,848; 2,862,586; 2,689,631; 2,671,706; and 2,606,636. These bags also provide examples of the various types of features available with such bags and examples of different mechanisms for
35 retaining the clothes hangers inside the bag.

An example of a double fold, soft-type garment bag is disclosed in U.S. Patent No. 3,958,675, incorporated herein in its entirety by reference, and in Figures 1-6 herein.

5 A soft type garment bag has been previously sold. This bag is described as follows. The bag has a substantially rectangular front panel with a rounded top portion and a flat bottom portion. The front panel is divided by a conventional zipper that extends from the top portion to the bottom portion into a left hand section and a right hand section. A top flexible cloth handle is
10 attached to the top portion and a corresponding bottom flexible cloth handle is attached to the bottom portion. A hook part of a conventional metal hanger that is mounted inside the bag would extend above the top portion of the bag.

The bag has a substantially rectangular rear panel which has
15 substantially the same shape and dimensions as the front panel, and thus has a rounded top portion and a flat bottom portion. The rear panel has an exterior side and an interior side. An outwardly extending top pocket is attached, such as by sewing, to the exterior side of the rear panel, and an inwardly extending
20 bottom pocket is attached, such as by sewing, to the interior side of the rear panel. Two zippers are located at the tops, respectively, of the top pocket and bottom pocket. The top pocket has a vertically extending gusset located in the middle thereof so as to allow for expansion of the top pocket.

25 The top handle has two ends which are attached, such as by sewing with a conventional box stitch, respectively, to the exterior side of the rear panel spaced slightly down from the top portion. Two additional horizontally extending stitches respectively connect a portion of the handle near its ends to a
30 top periphery of the rear panel. Thus, there is a small part or loop of each handle end that is essentially somewhat like a belt loop on pants. Similarly, the bottom handle has two ends which are attached, such as by sewing with a conventional box stitch to the exterior side of the rear panel spaced slightly down from the
35 bottom portion. Two additional horizontally extending stitches

respectively connect a portion of the bottom handle near the ends thereof to a bottom periphery of the rear panel. Thus, there is a small part or loop of each handle end that is essentially somewhat like a belt loop.

5 An elongate attachment strap is fixedly, transversely connected to the bottom handle. The strap has a conventional attachment means, such as Velcro or a similar attachment means, at each of the ends thereof for connecting the two ends thereof into a ring. In this way the strap can be wrapped around the top
10 handle when the bag is in a folded state.

The bag has an end or peripheral panel. The end panel completely encircles the peripheries of the front and rear panels and is attached thereto, such as by sewing, with respective bindings.

15 The front and back panels and the end panel are made of a plastic, laminated flexible sheet material.

A conventional hanger clamp, or clamping lock, clamps the neck of hangers extending outside of the garment bag and holds them in place.

20 Many of the bags disclosed in the prior art are adapted for carrying short to medium length garments such as a jacket or a shirt, or a folded piece of clothing such as folded trousers. Those bags are inadequate for compact carrying while preventing wrinkling of a long piece of clothing such as a night gown or a
25 long winter coat. Thus, there is a need for a garment bag that can be easily and neatly carried in a compact fashion and can contain and protect long garments mounted on hangers without wrinkling the garments. In addition, there is a need for such a bag to fold up into a size that can be easily carried and easily
30 stored under the conventional seats of an airplane or in the overhead compartment of an airplane. There is also a need for a bag that is lighter, less expensive and easier to manufacture.

Summary of the Invention

The present invention overcomes the deficiencies of the prior art by providing a flexible tri-fold garment bag adapted for carrying long garments without wrinkling them. A flexible tri-fold garment bag according to an embodiment of the present invention comprises an elongated, flexible, front wall and an elongated, flexible, back wall connected to the front wall by a relatively narrow gusset which is attached to a peripheral portion of the front wall and to a peripheral portion of the back wall by sewn bindings. The front wall is comprised, in one specific embodiment of the present invention, of two lateral portions joined by a zipper which extends from a top portion of the front wall to a bottom portion of the front wall. In other embodiments, the zipper can be located near an edge of the front wall, along two or three sides of the front wall, or can even be positioned diagonally across the front wall. Also, in still further embodiments the garment bag can have more than one zippered opening. The back wall comprises three sections or folds: a first, top section, a second, middle section, and a third, bottom section. The top section and the middle section are separated by a first, intermediate spacing section, and the middle section and the bottom section are separated by a second, intermediate spacing section. Two handles are attached to the bag, one at the top of the bag and the other on the second, intermediate spacing section between the middle section and the bottom section of the back wall. The handles allow the bag to be carried either in an unfolded configuration, or in a folded configuration. Each section of the back wall is equipped with a pocket whose interior is accessible through at least a zippered opening located at the pocket top.

The unique configuration of both pockets and handles of the presently preferred embodiment of the invention enables the garment bag to fold into three sections, or folds, that are fully supported by the handles when carried in folded or unfolded configuration. The handle attached to the second, intermediate

spacing section is shorter than the handle attached to the bag top. The special placement and size of the handles enable the bag to retain its shape in the folded state, while permitting the bag and attached pockets to be stuffed full, thereby providing
5 maximum space for garments and accessories.

Still further advantages of the specific embodiment of the present invention include the top pocket comprises three vertical pleats for appearance and functionality. A self-trim fabric binding secures the zippered opening to the top of the pocket and
10 secures the pleats in place.

The top pocket also comprises a bottom gusset. This bottom gusset comprises a bottom portion of the top pocket, folded on one side and sewn onto itself with a first strip of self-trim fabric binding, and sewn on the other side to the bag with a
15 second strip of self-trim fabric binding.

Additionally, the structure of the pockets prevents the bag from tearing when packed and carried in the folded position.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view in scale of a tri-fold bag according to the present invention shown in an unfolded
20 configuration, taken from the back and left side of the bag;

FIG. 2 is a rear elevational view of the bag of FIG. 1;

FIG. 3 is a front elevational view of the bag of FIG. 1;

FIG. 4 is a bottom plan view of the bag of FIG. 1;

25 FIG. 5 is a top plan view of the bag of FIG. 1 depicting a clothes hanger clamping lock;

FIG. 6 is a side elevational view of the bag of FIG. 1;

FIG. 7 is a rear perspective view of the tri-fold bag of FIG. 1 in a semi-folded configuration hanging by a mid-section
30 handle and with a zipper for a depicted middle pocket being open;

FIG. 8 is a rear elevational view of the bag of FIG. 1 depicted in a completely folded configuration;

FIG. 9 is a front elevational view of the bag of FIG. 8.

FIG. 10 is a side elevational view of the tri-fold bag of FIG. 1 depicted in a partially folded configuration;

FIG. 11 is a perspective view, taken from above and on the left side, of the bag of FIG. 8 in a completely folded

5 configuration hanging from a hook; and

FIG. 12 is a perspective view taken mostly from above of the bag of FIG. 1 depicting the upper part of the bag with the zipper (not shown) being opened so as to show the interior of the bag.

10 FIG. 13 is a bottom plan view similar to FIG. 4, but with the bag being stuffed so as to depict certain features of the bag.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

With reference now to the figures wherein like elements have
15 the same number throughout the several views, and in particular with reference to FIGs. 1-11, there is depicted a flexible tri-fold bag 200 according to a preferred embodiment of the present invention.

As shown particular in FIGs. 1 and 3, a flexible tri-fold
20 garment bag 200 is depicted in an unfolded configuration. Bag 200 has a substantially rectangular front panel 202 with a rounded top portion 204 and a flat bottom portion 206. Front panel 202 is divided by a conventional zipper 208 that extends from the top of top portion 204 to a top section of bottom
25 portion 206 into a left hand section 210 and a right hand section 212. A top flexible cloth handle 214 is attached to a top portion of bag 200. A hook part of a conventional metal hanger H extends above top portion 204 of bag 200.

As particularly depicted in FIG. 2, bag 200 has a
30 substantially rectangular rear panel 222 which has substantially the same shape and dimensions as front panel 202, and thus has a rounded top portion 224 and a flat bottom portion 226. Rear panel 222 has an exterior side 228, as depicted in FIG. 2 and an interior side 230, as depicted in FIG. 12. An outwardly
35 extending upper pocket 232 is attached, such as by sewing, to

exterior side 228 of rear panel 222 at a location adjacent to and below rounded top portion 224. An inwardly extending lower pocket 234 is attached, such as by sewing, to interior side 230 of rear panel 222 at a location adjacent to and above flat bottom portion 226. A middle pocket 233 is attached, such as by sewing, to exterior side 228 of rear panel 222 at an intermediate location between upper pocket 232 and lower pocket 234. As shown in FIG. 2, a flexible cloth handle 216 is attached to rear panel 222, at a location between middle pocket 233 and lower pocket 234.

Attachment means for connecting one part of garment bag 200 to another part, other than by sewing, include such conventional methods as using an adhesive or by welding, such as hot fusion welding.

Upper pocket 232 has a central, vertically extending, gusset 236 located in the middle thereof, and two vertical extending end gussets 238 and 240, so as to allow for expansion of upper pocket 232. Middle pocket 233 has a vertically extending gusset 242 located in the middle thereof so as to allow for expansion of middle pocket 233.

Upper pocket 232 has a top zipper 244 and lower pocket 234 has a top zipper 246. Middle pocket 233 has two zippers, a top zipper 248 and a bottom zipper 250, which allows access to the interior of middle pocket 233 when bag 200 is in either an unfolded or a folded position.

Rear panel 222 has a intermediate section 252 between upper pocket 232 and middle pocket 233, to accommodate enough room for a completely filled lower pocket 234 between a completely filled upper pocket 232 and a completely filled middle pocket 233 when in a folded configuration as shown in FIGs. 8, 9 and 11. Intermediate section 252 provides bag 200 with a wide bottom surface.

Upper pocket 232 has a bottom gusset 254, as particularly depicted in FIG. 13, which is comprised of a bottom portion 256 of upper pocket 232 sewn on one side to rear panel 222 with a

first self-trim fabric binding 258, and sewn on another side onto itself with a second self-trim fabric binding 260. Bindings 258 and 260 provide the requisite support for upper pocket 232 and prevent tearing thereof when bag 200 is folded.

5 As depicted in the figures, a peripheral gusset 262 is attached to front panel 202 and to rear panel 222 along their sides, bottom and top. Gusset 262 is sewn to a peripheral edge of front panel 202 with a strip of a self-trim fabric binding 264, and it is sewn a peripheral edge of rear panel 222 with a
10 strip of a self-trim fabric binding 266.

In one embodiment of the invention, front and back panels 202 and 222 and end panel 282 are made of a flexible sheet material such as a 600 denier polyester cover and laminated with a PVC backing. However, the sheet material can be any
15 conventional material to include a polyester canvas, nylon and cloth.

Exemplary dimensions of bag 200 are as follows. Bag 200 has an overall length of 52 inches and as shown in FIG. 2 is divided into six sections: a top section 302 that extends to the top of
20 bag 200 and is 5 inches high; a top pocket section 304 that is 10 inches high; a middle spacing section 306 that is 72 inches high; a middle pocket section 308 that is 132 inches high; a lower spacing section 310 that is 3 inches high; and a bottom pocket section 312 that extends to the bottom of bag 200 and is 13
25 inches high. Obviously these dimensions are only of the particularly disclosed embodiment of the present invention and other dimensions can be used.

The present garment bag 200 has a thickness of 3 inches at the top portion 204, but the bag 200 can be much thicker in the
30 central areas and particularly in the pocket areas when bag 200 is completely full. Thus, the height of spacing sections 306 and 310 must be varied as the overall thickness of an unfolded bag 200 changes so that bag 200 can be folded into three folds and upper pocket 232 and middle pocket 233 can be aligned in the
35 folded state, as seen for example in FIG. 11.

Turning now to FIG. 7, garment bag 200 is depicted hanging from handle 216 in a semi-folded position. As can be seen in FIG. 7, bottom pocket section 312 and middle pocket section 308 have been aligned and located so as to be in contact with each other. Lower spacing section 310 is now in a top position relative to the rest of bag 200.

As also can be seen in FIG. 7, handle 216 has two ends, 270 and 272 which are attached, such as by sewing with a conventional box stitch 274 and 276, respectively, to portions of rear panel 222 located inside middle pocket 233. Bottom zipper 250 of middle pocket 233 (which in this semi-folded view is now located at the top of the figure) has an interior rim 282 and an exterior rim 284. Interior rim 282 is sewn to rear panel 222 with a strip of self-trim binding at a location slightly higher than box stitches 274 and 276 when garment bag 200 is hanging in the semi-folded position depicted in FIG. 7. Handle ends 270 and 272 are located between interior rim 282 and rear panel 222 at two additional points of attachment 278 and 280, respectively.

Handle 214 has two end portions 281 and 283 which are attached to rear panel 222 by two box stitches (not shown) located inside upper pocket 232. Handle end portions 281 and 283 are also sewn between rear panel 222 and zipper 244 at attachment points 286 and 288, respectively. Two additional horizontally extending stitches 190 and 192 respectively connect a portion of handle 214 to a periphery of rounded top portion 224 of rear panel 222. Thus, there is a small part or loop 293 of each handle end of handle 214 that is essentially somewhat like a belt loop on pants.

An elongate attachment strap 218 is fixedly, transversely connected to bottom handle 216. Strap 218 has a conventional, Velcro or similar attachment means at each of the ends thereof (not shown) for connecting the two ends thereof into a ring, such as shown in FIG. 7. In this way strap 218 can be wrapped around top handle 214 when bag 200 is folded, as shown in FIGs. 8, 9 and 11.

With continuing reference to FIGs. 4, 5, and 6, there are depicted, respectively, the bottom portion, one side portion, and the top portion of peripheral gusset 262. Gusset 262 completely encircles the peripheries of front and rear panels 202 and 222 and is attached thereto, such as by sewing, with respective bindings 264 and 266.

A hanger clamp 294, shown in FIG. 5, clamps the neck of hangers extending outside of the garment bag and holds them in place as depicted in FIG. 3.

In use, bag 200 is folded by first holding handle 216 up as depicted in FIG. 7, thereby bringing bottom section 312 in contact and aligned with middle section 308. In a second step, top section 304 is lifted up by pulling handle 214 up, to bring top section 304 in contact and aligned with bottom section 312, as depicted in FIGs. 8, 9 and 10.

As depicted in FIG. 11, handle 214 is slightly longer than handle 216, in order to accommodate for extra thickness of the pockets and the main cavity when bag 200 is fully loaded and held in a folded position. This difference of length also allows bottom section 312 to be positioned between top section 304 and middle section 308 without disrupting the alignment of the pockets when bag 200 is held in a folded position. Handle 216 being shorter than handle 214 allows sections 308 and 312 to be carried in a higher position when bag 200 is held in a folded configuration, and thereby permits middle spacing section 306 to easily be folded around the bottom of section 312 even when the bag is fully loaded.

During manufacturing of the bag, the bottom gusset is created on the pocket by folding the pocket at a point where the gusset begins, and sewing the first strip of self-trim fabric binding across the fold to create one side of the bottom gusset, thereby also securing the pleats in place. The other side of the bottom gusset is then sewn to the bag with the second strip of self-trim fabric binding.

The spacing section between the top pocket and the middle pocket is specifically adapted to accommodate enough room for the bag to fold around the bottom third section when carried in a folded position, and also to ensure that the top and middle
5 pockets are properly positioned on either side of the bag in the folded position.

Although only one exemplary embodiment of the present invention has been described above, it will be appreciated by those skilled in the art that many changes may be made to these
10 embodiments without departing from the principles and the spirit of the invention.

We Claim: